

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A plasma processing tool comprising:

a process chamber;

a gas inject plate and an electrode plate positioned within the process chamber; and

a fastening component configured to fasten said gas inject plate and said electrode plate together, said fastening component comprising:

a first surface configured to be exposed to plasma processing performed in the plasma processing tool;

a second surface configured to contact the gas inject plate;

a stem extending from the second surface and configured to at least partially protrude through the gas inject plate and the electrode plate; and

a locking pin extending from at least one side of the stem and configured to contact the electrode plate such that the gas inject plate and electrode plate are fastened together between the second surface and locking pin,

wherein at least one of the first surface[,], and the second surface, ~~the stem, and the locking pin~~ is at least one of made of or coated with a material that is highly resistant to erosion resulting from plasma processing and said stem and locking pin are not made from or coated with said material, and

wherein said fastening component is not shielded from said plasma by a plasma shield component.

Claim 2 (Original): The fastening component of Claim 1, wherein the material is at least one of anodized aluminum, polyimide, silicon, quartz, and ceramic.

Claim 3 (Original): The fastening component of Claim 1, wherein the material is a combination of at least two of anodized aluminum, polyimide, silicon, quartz, and ceramic.

Claim 4 (Original): The fastening component of Claim 1, wherein a cross-section of the stem is smaller than the second surface.

Claim 5 (Original): The fastening component of Claim 1, wherein a longitudinal axis of the locking pin is orthogonal to a longitudinal axis of the stem.

Claim 6 (Original): The fastening component of Claim 1, wherein the locking pin is attached to the stem by an interference fit.

Claim 7 (Original): The fastening component of Claim 1, wherein the locking pin is attached to the stem by brazing.

Claim 8 (Currently Amended): A plasma processing tool comprising:
a process chamber;
a gas inject plate and an electrode plate positioned within the process chamber;
a fastening system for fastening the gas inject plate to the electrode plate, the fastening system comprising:
a first fastening component including a first contacting surface configured to contact the gas inject plate, a stem extending from the first surface, and a locking pin extending from at least one side of the stem wherein a portion of said first fastening component other than said stem and locking pin is at least one made of and coated with a material that is highly resistant to erosion resulting from plasma processing; and

a second fastening component including a hole, a fastening surface configured to contact the locking pin, and a second contacting surface configured to contact the electrode plate,

wherein the stem, the locking pin, and the hole are configured such that the gas inject plate and the electrode plate are fastened to each other when:

the locking pin protrudes through the gas inject plate, the electrode plate, and the hole, and

the stem is rotated such that the locking pin contacts a locking area of the fastening surface, and

wherein said fastening components are not shielded from said plasma by a plasma shield component.

Claim 9 (Previously Presented): The fastening system of Claim 8, wherein the second contacting surface is configured to be movable relative to the electrode plate to change a fastening force between the gas inject plate and the electrode plate.

Claim 10 (Previously Presented): The fastening system of Claim 9, wherein the second contacting surface includes a first threaded surface, and the electrode plate includes a second threaded surface configured to engage with the first threaded surface.

Claim 11 (Previously Presented): The fastening system of Claim 9, wherein the second fastening component is configured to be inserted into an opening of the electrode plate.

Claim 12 (Original): The fastening component of Claim 8, wherein a longitudinal axis of the locking pin is orthogonal to a longitudinal axis of the stem.

Claim 13 (Original): The fastening component of Claim 8, wherein the locking pin is attached to the stem by an interference fit.

Claim 14 (Original): The fastening component of Claim 8, wherein the locking pin is attached to the stem by brazing.

Claim 15 (Original): The fastening component of Claim 8, wherein the hole includes a first portion shaped to receive the stem and a second portion shaped to receive the locking pin.

Claim 16 (Original): The fastening component of Claim 8, wherein the second fastening component includes a restricting element provided at the fastening surface and configured to restrict rotation of the stem.

Claim 17 (Original): The fastening component of Claim 16, wherein the restricting element is a pin attached to the fastening surface.

Claim 18 (Previously Presented): The fastening system of Claim 8, further comprising:

a locking element configured to restrict movement between the second contacting surface and the electrode plate.

Claim 19 (Original): The fastening system of Claim 18, wherein the locking element includes a helical coil.

Claim 20 (Cancel).

Claim 21 (Original): The fastening component of Claim 20, wherein the material is at least one of anodized aluminum, polyimide, silicon, quartz, and ceramic.

Claim 22 (Original): The fastening component of Claim 20, wherein the material is a combination of at least two of anodized aluminum, polyimide, silicon, quartz, and ceramic.

Claim 23 (Currently Amended): A method for fastening a plasma process chamber gas inject plate to a plasma process chamber electrode plate, comprising:

providing a fastening component with an exterior surface made out of a material that is highly resistant to erosion resulting from plasma processing, ~~wherein the fastening component includes~~ and a first surface, a stem extending from the first surface, and a locking pin extending from at least one side of the stem which are not made out of said material, ~~and wherein said fastening component~~ is not shielded by a plasma shield for shielding the fastening component from a plasma within said process chamber;

inserting the stem and the locking pin through the gas inject plate and the electrode plate; and

rotating the stem such that the locking pin contacts a second surface of the electrode plate and such that the gas inject plate and the electrode plate are fastened between the locking pin and the first surface.

Claim 24 (Original): The method of Claim 23, wherein the providing step includes at least one of making or coating at least a portion of the fastening component with at least one of anodized aluminum, polyimide, silicon, quartz, and ceramic.

Claim 25 (Original): The method of Claim 23, wherein the providing step includes at least one of making or coating at least a portion of the fastening component with a combination of at least two of anodized aluminum, polyimide, silicon, quartz, and ceramic.

Claim 26 (Previously Presented): The method of Claim 23, further comprising:
positioning a stopping element at the electrode plate to restrict rotation of the stem after the stem and the locking pin are inserted through the electrode plate and the gas inject plate.

Claim 27 (Previously Presented): The method of Claim 23, further comprising:
positioning an elastic element between the first surface and the electrode plate or between the electrode plate and the gas inject plate such that the rotating step creates a spring load between the electrode plate and the gas inject plate.

Claim 28 (Original): The method of Claim 27, wherein the elastic element is electrically conductive.

Claim 29 (Previously Presented): The method of Claim 23, further comprising:
providing the gas inject plate with a hole including a first portion shaped to receive the stem and a second portion shaped to receive the locking pin.

Claim 30 (Currently Amended): A method for fastening a plasma process chamber gas inject plate to a plasma process chamber electrode plate with a first fastening component having a stem and a second fastening component, comprising:

inserting the stem of first fastening component through the gas inject plate, through at least a portion of the electrode plate, and through the second fastening component;

rotating the first fastening component less than a full rotation such that the first fastening component contacts an outer surface of the second fastening component and such that the gas inject plate and the electrode plate are fastened to each other, with at least one of the first fastening component and the second fastening component not shielded by a plasma shield; and

at least one of manufacturing and coating said at least one of the first fastening component and the second fastening component with a material that is highly resistant to erosion resulting from plasma processing and not manufacturing the stem from or coating the stem with said material.

Claim 31 (Original): The method of Claim 30, further comprising:

providing the first fastening component with a stem and a locking pin extending from the stem.

Claim 32 (Original): The method of Claim 31, wherein the rotating step includes:

rotating the stem such that the locking pin contacts the outer surface.

Claim 33 (Original): The method of Claim 30, further comprising:

positioning a restricting element at the second fastening component to prevent full rotation of the first fastening component when the first fastening component protrudes through the second fastening component.

Claim 34 (Previously Presented): The method of Claim 30, further comprising:
providing the electrode plate with a hole; and
inserting at least a portion of the second fastening component into the hole.

Claim 35 (Original): The method of Claim 34, wherein,
the portion of the second fastening component includes a first threaded surface and
the hole includes a second threaded surface corresponding to the first threaded surface.

Claim 36 (Previously Presented): The method of Claim 34, further comprising:
adjusting the position of the second fastening component within the hole to change a
fastening force between the gas inject plate and the electrode plate.

Claim 37 (Canceled).

Claim 38 (Previously Presented): The method of Claim 30, wherein the material is at
least one of anodized aluminum, polyimide, silicon, quartz, and ceramic.

Claim 39 (Previously Presented): The method of Claim 30, wherein the material is a
combination of at least two of anodized aluminum, polyimide, silicon, quartz, and ceramic.

Claim 40 (Previously Presented): The method of Claim 30, further comprising:

positioning an elastic element between the gas inject plate and the electrode plate such that the rotating step creates a spring load between the gas inject plate and the electrode plate.

Claim 41 (Previously Presented): The method of Claim 30, further comprising:
positioning an elastic element between the first fastening component and the gas inject plate such that the rotating step creates a spring load between the gas inject plate and the electrode plate.

Claim 42 (Previously Presented): The method of Claim 30, further comprising:
positioning an elastic element between the second fastening component and the electrode plate such that the rotating step creates a spring load between the gas inject plate and the electrode plate.

Claim 43 (Original): The method of Claim 40, wherein the elastic element is electrically conductive.

Claims 44-47 (Canceled).

Claim 48 (Previously Presented): The plasma processing tool of Claim 1, wherein said material that is highly resistant to erosion does not include a metal.

Claim 49 (Previously Presented): The plasma processing tool of Claim 20, wherein the material that is highly resistant to erosion does not include a metal.

Claim 50 (Previously Presented): The method of Claim 24, wherein said making or coating at least a portion of the fastening component does not include making or coating the fastening component with a metal.

Claim 51 (Previously Presented): The method of Claim 30, wherein said material that is highly resistant to erosion does not include a metal.

Claim 52 (Currently Amended): The plasma processing tool of Claim 1, wherein said stem ~~does not include said material that is highly resistant to erosion~~ and locking pin are made from a different material than said head, said different material possessing characteristics necessary to withstand loads created by the fastening component.

Claim 53 (Currently Amended): The fastening system of Claim [[20]] 8, wherein said stem ~~does not include said material that is highly resistant to erosion~~ is made from a different material than said portion, said different material possessing a characteristic necessary to withstand loads created by the fastening system.

Claim 54 (Currently Amended): The method of Claim 24, wherein said at least a portion of the fastening component ~~does not include said stem of the fastening component~~ stem and locking pin are made from a different material than said head, said different material possessing characteristics necessary to withstand loads created by the fastening component.

Claim 55 (Currently Amended): The method of Claim 30, wherein said stem ~~does not~~
~~include said material that is highly resistant to erosion~~ is made from a different material than
said portion, said different material possessing a characteristic necessary to withstand loads
created by the fastening system.